

# Educational Media Foundation

5700 West Oaks Boulevard ♦ Rocklin ♦ California ♦ 95765

Exhibit 18

Lebanon, OR

## Channel Study

REFERENCE		CH# 201C3- 88.1 MHz, Pwr= 0.17 kW DA, HAAT= 757.0 M, COR= 1248 M								DISPLAY DATES	
44 28 59.0 N.		Average Protected F(50-50)= 33.3 km								DATA 03-19-15	
122 34 55.0 W.		Standard Directional								SEARCH 03-19-15	
CH CITY	CALL	TYPE STATE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
201C3 Lebanon	KGRI!	CP	DCX OR	0.0 0.0	0.00 BPED20120726AEZ	44 28 59.0 122 34 55.0	0.170 761	81.4 1252	26.8 Educational Media Foundati	-108.1	-108.0
201C3 Lebanon	KGRI!	LIC	DEX OR	0.0 0.0	0.00 BMLED20120608ACW	44 28 59.0 122 34 55.0	0.170 754	81.0 1245	26.6 Educational Media Foundati	-107.6	-107.7
201C2 Glenden Beach	KQOC	LIC	DCX OR	285.2 104.2	120.24 BLED20130107AAC	44 45 23.0 124 02 52.0	6.500 317	88.6 369	32.6 All Classical Public Media	3.3	1.0
201A Eugene	KWVA	LIC	DCX OR	223.5 43.1	61.31 BLED20100819ABH	44 04 55.0 123 06 34.0	1.000 54	13.4 232	4.2 Associated Students Of The	35.0	3.4
203A Turner	KMUZ	LIC	DCX OR	315.7 135.4	46.80 BLED20111129ABU	44 46 60.0 122 59 44.0	0.032 242	0.4 352	12.1 Willamette Information, Ne	12.7	33.8
201C2 Bend	KLBR	LIC	DCX OR	119.7 300.4	96.93 BLED20051012ADB	44 02 49.0 121 31 50.0	5.000 259	28.5 1827	8.5 Lane Community College	44.7	12.7
202C2 Portland	KBVM	LIC	CX OR	354.1 174.0	115.42 BLED20060221ADR	45 30 58.0 122 43 59.0	3.500 437	71.0 528	47.1 Catholic Broadcasting Nort	15.5	23.3
204A Corvallis	KBVR	LIC	CN OR	279.5 99.0	55.82 BLED19810209AS	44 33 50.0 123 16 30.0	0.340 -25	1.3 116	10.0 Oregon State University	27.6	45.3
201C2 The Dalles	KQHR	LIC	DCX OR	32.7 213.5	164.54 BLED20120315ADV	45 43 19.0 121 26 14.0	4.000 340	96.9 698	36.1 All Classical Public Media	46.3	63.0
204C1 Sandy	KZRI	LIC	CX OR	35.6 216.2	116.82 BLED20111005AJI	45 20 01.0 121 42 45.0	3.700 531	3.9 1877	61.6 Educational Media Foundati	91.5	54.3
201A Florence	KLFO	LIC	CX OR	244.3 63.3	132.77 BLED20050824ABL	43 57 26.0 124 04 26.0	0.250 167	52.2 254	16.1 Lane Community College	64.2	56.6
203C2 Junction City	KPIJ	LIC	DCX OR	254.6 73.9	83.77 BLED20080626ABB	44 16 44.0 123 35 38.0	0.550 705	0.6 1041	24.0 Calvary Chapel Of Twin Fal	63.7	59.5
203A Oakridge	KAVE	LIC	HX OR	172.5 352.6	83.17 BLED20040220AAO	43 44 27.0 122 26 50.0	0.400 -392	1.4 399	8.0 Lane County School Distric	61.1	74.8
202A Cottage Grove	DKCGO	LIC	CX OR	206.0 25.6	90.33 BLED20130613AAA	43 45 06.0 123 04 29.0	0.100 -89	8.0 245	5.6 Western Oregon Opry, Ltd.	68.9	61.5

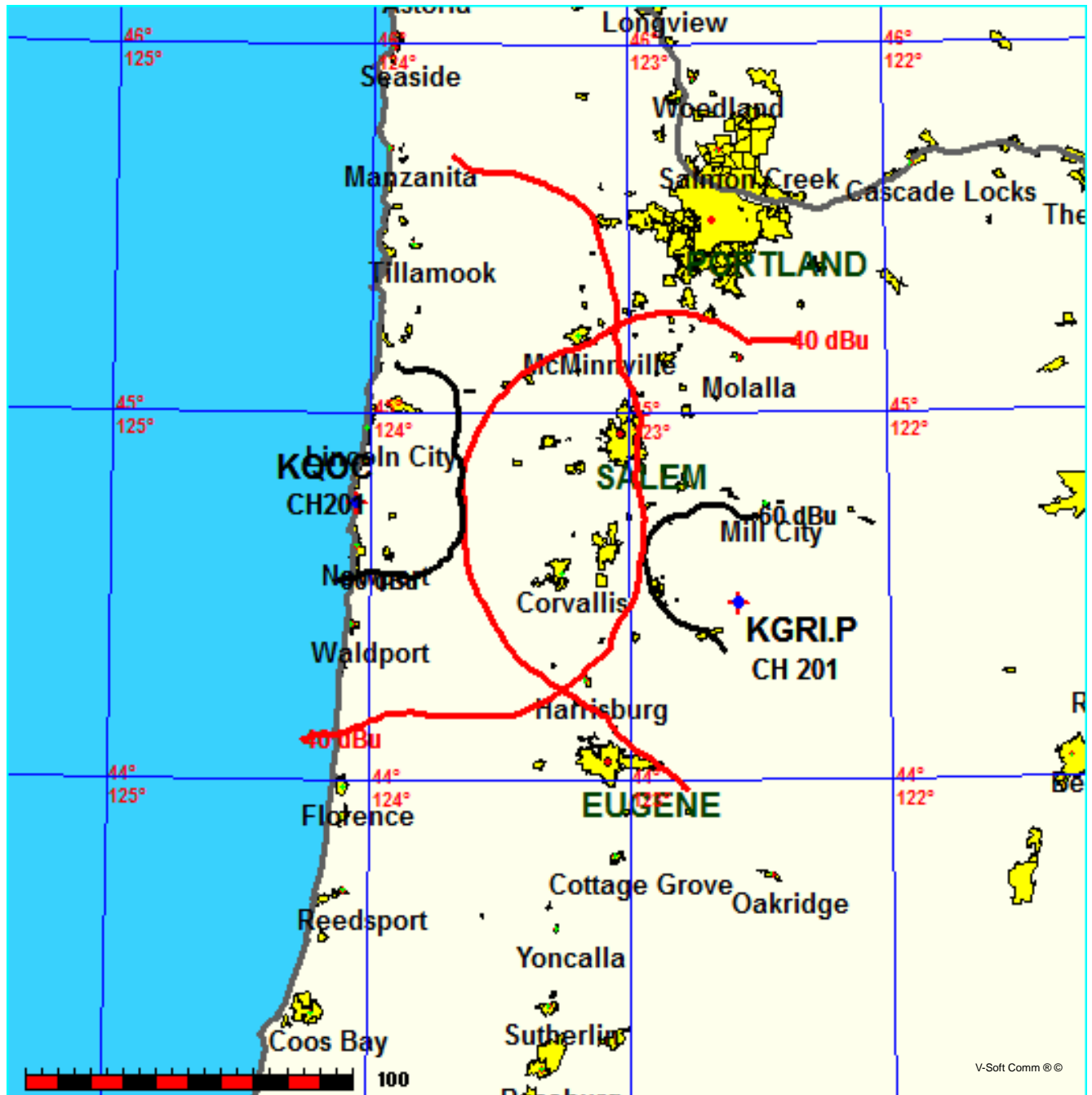
Terrain database is NGDC 30 SEC, R= 73.215 qualifying spacings or  
FCC minimum spacings in KM, M= Margin in KM  
Contour distances are on direct line to and from reference station.  
Reference Zone= - Zone 2, Co to 3rd adjacent.  
All separation margins (if shown) include rounding. Call signs with exclamation marks need not be protected.  
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, \_= Omni),  
Polarization (C,H,V,E), Beamtilt(Y,N,X)  
< = Station meets FCC minimum distance spacing for its class.  
< = Contour Overlap

Exhibit 18-A

FMCommander Single Allocation Study - 03-20-2015 - NGDC 30 SEC  
KGRI.P's Overlaps (In= 3.29 km, Out= 0.99 km)

KGRI.P CH 201 C3 DA  
Lat= 44 28 59.0, Lng= 122 34 55.0  
0.17 kW 757 M HAAT, 1248 M COR  
Prot.= 60 dBu, Intef.= 40 dBu

KQOC CH 201 C2 DA BLED20130107AAC  
Lat= 44 45 23.0, Lng= 124 02 52.0  
6.5 kW 317 M HAAT, 369 M COR  
Prot.= 60 dBu, Intef.= 40 dBu



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Exhibit 18-A

Lebanon, OR

## KQOC vs. KGRI.P

03-20-2015

Terrain Data: NGDC 30 SEC

FMOver Analysis

KGRI.P

KQOC BLED20130107AAC

Channel = 201C3  
Max ERP = 0.17 kW  
RCAMSL = 1248 M  
N. Lat. 44 28 59.0  
W. Lng. 122 34 55.0  
Protected  
60 dBu

Channel = 201C2  
Max ERP = 6.5 kW  
RCAMSL = 369 M  
N. Lat. 44 45 23.0  
W. Lng. 124 02 52.0  
Interfering  
40 dBu

Azi muth (degrees)	ERP (kW)	HAAT (m)	Di st (km)	Azi muth (degrees)	ERP (kW)	HAAT (m)	Di st (km)	Actual (dBu)	I X (km)
275.0	000.0434	0915.2	025.7	106.9	001.6315	0262.3	095.0	38.09	
276.0	000.0454	0915.8	026.0	106.7	001.6315	0262.1	094.6	38.21	
277.0	000.0474	0914.8	026.3	106.5	001.6315	0261.8	094.2	38.32	
278.0	000.0496	0911.8	026.6	106.2	001.6315	0261.6	093.9	38.42	
279.0	000.0516	0907.6	026.8	105.9	001.6315	0261.2	093.6	38.50	
280.0	000.0539	0901.9	027.0	105.7	001.6315	0260.9	093.3	38.58	
281.0	000.0568	0895.4	027.3	105.4	001.6315	0260.6	092.9	38.68	
282.0	000.0596	0888.5	027.6	105.1	001.6315	0260.3	092.7	38.75	
283.0	000.0626	0882.4	027.8	104.8	001.6315	0260.0	092.4	38.84	
284.0	000.0656	0876.7	028.1	104.5	001.6315	0259.6	092.1	38.91	
285.0	000.0688	0870.4	028.3	104.2	001.6315	0259.1	091.8	38.98	
286.0	000.0720	0863.1	028.5	103.9	001.6315	0258.5	091.6	39.02	
287.0	000.0752	0856.0	028.7	103.6	001.6315	0257.6	091.4	39.06	
288.0	000.0786	0850.7	029.0	103.3	001.6315	0256.7	091.2	39.09	
289.0	000.0819	0848.6	029.3	102.9	001.6315	0255.7	091.0	39.13	
290.0	000.0855	0848.6	029.6	102.6	001.6315	0254.5	090.7	39.19	
291.0	000.0898	0850.0	030.0	102.2	001.6315	0253.5	090.4	39.27	
292.0	000.0946	0852.4	030.5	101.9	001.6315	0252.6	090.0	39.36	
293.0	000.0992	0854.1	030.9	101.5	001.6315	0251.7	089.7	39.43	
294.0	000.1040	0853.8	031.3	101.1	001.6315	0251.3	089.4	39.51	
295.0	000.1091	0850.8	031.6	100.7	001.6315	0251.4	089.1	39.58	
296.0	000.1140	0846.0	031.9	100.3	001.6315	0252.2	089.0	39.66	
297.0	000.1191	0840.3	032.2	099.9	001.6281	0253.3	088.9	39.72	
298.0	000.1243	0834.8	032.5	099.5	001.6141	0254.2	088.8	39.73	
299.0	000.1299	0829.3	032.7	099.1	001.6000	0254.5	088.7	39.73	
300.0	000.1353	0823.6	033.0	098.7	001.5860	0254.6	088.7	39.71	
301.0	000.1386	0817.5	033.0	098.3	001.5734	0254.7	088.8	39.63	
302.0	000.1420	0811.7	033.1	098.0	001.5608	0254.8	089.0	39.55	
303.0	000.1451	0806.8	033.2	097.6	001.5484	0255.0	089.1	39.47	
304.0	000.1486	0803.5	033.3	097.2	001.5356	0255.3	089.3	39.41	
305.0	000.1521	0801.1	033.5	096.9	001.5226	0255.8	089.4	39.34	
306.0	000.1557	0798.8	033.6	096.5	001.5098	0256.2	089.5	39.28	
307.0	000.1593	0795.3	033.8	096.1	001.4974	0257.0	089.7	39.21	
308.0	000.1626	0790.4	033.8	095.8	001.4858	0258.4	090.0	39.14	
309.0	000.1663	0784.5	033.9	095.4	001.4745	0259.7	090.2	39.06	
310.0	000.1700	0778.9	033.9	095.1	001.4634	0261.0	090.5	38.98	
311.0	000.1700	0774.8	033.8	094.8	001.4544	0262.0	090.9	38.85	
312.0	000.1700	0773.0	033.8	094.5	001.4450	0263.0	091.3	38.73	
313.0	000.1700	0772.8	033.8	094.2	001.4353	0264.0	091.7	38.62	
314.0	000.1700	0773.3	033.8	093.9	001.4256	0265.2	092.0	38.52	
315.0	000.1700	0773.3	033.8	093.7	001.4164	0266.5	092.4	38.41	

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Exhibit 18-A

Lebanon, OR

## KGRI.P vs. KQOC

03-20-2015 Terrain Data: NGDC 30 SEC FMOver Analysis

KQOC BLED20130107AAC

KGRI.P

Channel = 201C2  
Max ERP = 6.5 kW  
RCAMSL = 369 M  
N. Lat. 44 45 23.0  
W. Lng. 124 02 52.0  
Protected  
60 dBu

Channel = 201C3  
Max ERP = 0.17 kW  
RCAMSL = 1248 M  
N. Lat. 44 28 59.0  
W. Lng. 122 34 55.0  
Interfering  
40 dBu

Azi muth (degrees)	ERP (kW)	HAAT (m)	Di st (km)	Azi muth (degrees)	ERP (kW)	HAAT (m)	Di st (km)	Actual (dBu)	I X (km)
060.0	002.5880	0227.0	034.2	299.2	000.1309	0828.2	098.5	38.62	
061.0	002.4825	0224.4	033.6	298.8	000.1285	0830.7	098.3	38.63	
062.0	002.3792	0221.0	033.0	298.3	000.1258	0833.3	098.2	38.62	
063.0	002.2780	0222.1	032.8	298.0	000.1241	0835.0	097.9	38.67	
064.0	002.1791	0228.5	032.9	297.8	000.1233	0835.8	097.3	38.82	
065.0	002.0823	0239.8	033.3	297.8	000.1233	0835.8	096.6	39.04	
066.0	001.9878	0249.1	033.6	297.7	000.1227	0836.4	096.0	39.20	
067.0	001.8954	0256.9	033.7	297.5	000.1218	0837.4	095.5	39.34	
068.0	001.8052	0261.3	033.6	297.2	000.1204	0838.9	095.1	39.42	
069.0	001.7173	0264.9	033.4	296.9	000.1187	0840.7	094.8	39.48	
070.0	001.6315	0269.2	033.3	296.6	000.1172	0842.5	094.5	39.54	
071.0	001.5965	0274.2	033.4	296.4	000.1162	0843.6	094.0	39.67	
072.0	001.5619	0278.7	033.5	296.2	000.1151	0844.8	093.5	39.79	
073.0	001.5277	0280.4	033.4	295.9	000.1136	0846.4	093.2	39.86	
074.0	001.4939	0280.0	033.2	295.6	000.1119	0848.2	092.9	39.88	
075.0	001.4604	0275.8	032.8	295.1	000.1097	0850.3	092.9	39.83	
076.0	001.4273	0271.3	032.3	294.7	000.1074	0852.0	092.9	39.76	
077.0	001.3946	0267.1	031.9	294.2	000.1052	0853.3	092.9	39.68	
078.0	001.3623	0263.9	031.5	293.8	000.1032	0854.0	092.9	39.62	
079.0	001.3303	0264.3	031.4	293.5	000.1016	0854.3	092.7	39.61	
080.0	001.2988	0265.8	031.3	293.2	000.1001	0854.2	092.5	39.61	
081.0	001.2988	0265.4	031.3	292.9	000.0987	0854.0	092.2	39.63	
082.0	001.2988	0262.8	031.1	292.5	000.0971	0853.5	092.1	39.59	
083.0	001.2988	0258.2	030.9	292.2	000.0954	0852.7	092.0	39.52	
084.0	001.2988	0253.8	030.6	291.8	000.0936	0851.9	092.0	39.43	
085.0	001.2988	0251.5	030.5	291.5	000.0920	0851.1	091.9	39.38	
086.0	001.2988	0254.3	030.6	291.2	000.0908	0850.4	091.5	39.43	
087.0	001.2988	0258.9	030.9	291.0	000.0897	0849.9	091.1	39.51	
088.0	001.2988	0263.5	031.2	290.7	000.0885	0849.4	090.6	39.60	
089.0	001.2988	0267.7	031.4	290.4	000.0874	0849.0	090.2	39.66	
090.0	001.2988	0268.4	031.4	290.1	000.0859	0848.7	090.0	39.66	
091.0	001.3303	0268.8	031.7	289.8	000.0848	0848.5	089.6	39.71	
092.0	001.3623	0269.3	031.9	289.5	000.0837	0848.4	089.2	39.77	
093.0	001.3946	0269.2	032.0	289.2	000.0826	0848.5	088.9	39.81	
094.0	001.4273	0265.0	032.0	288.8	000.0814	0848.7	088.9	39.77	
095.0	001.4604	0261.4	031.9	288.5	000.0802	0849.3	088.8	39.74	
096.0	001.4939	0257.4	031.9	288.1	000.0790	0850.3	088.7	39.70	
097.0	001.5277	0255.6	031.9	287.8	000.0778	0851.7	088.6	39.70	
098.0	001.5619	0254.8	032.0	287.4	000.0767	0853.4	088.4	39.72	
099.0	001.5965	0254.6	032.2	287.1	000.0755	0855.5	088.1	39.75	
100.0	001.6315	0253.0	032.3	286.7	000.0743	0857.9	088.0	39.75	
101.0	001.6315	0251.2	032.2	286.4	000.0731	0860.5	088.1	39.69	
102.0	001.6315	0252.9	032.3	286.0	000.0720	0863.2	087.9	39.69	

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Exhibit 18-A

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Lebanon, OR

103.0	001.6315	0255.9	032.4	285.6	000.0708	0865.9	087.7	39.71
104.0	001.6315	0258.7	032.6	285.3	000.0696	0868.6	087.5	39.72
105.0	001.6315	0260.1	032.7	284.9	000.0684	0871.2	087.4	39.70
106.0	001.6315	0261.3	032.8	284.5	000.0672	0873.7	087.4	39.66
107.0	001.6315	0262.3	032.8	284.1	000.0660	0876.0	087.4	39.62
108.0	001.6315	0262.9	032.9	283.7	000.0648	0878.1	087.4	39.56
109.0	001.6315	0262.5	032.9	283.4	000.0637	0880.2	087.5	39.48
110.0	001.6315	0260.9	032.8	283.0	000.0627	0882.3	087.6	39.38
111.0	001.6315	0259.5	032.7	282.6	000.0616	0884.4	087.8	39.26
112.0	001.6315	0256.5	032.5	282.3	000.0605	0886.5	088.1	39.12
113.0	001.6315	0251.9	032.2	282.0	000.0595	0888.7	088.5	38.95
114.0	001.6315	0247.1	031.9	281.7	000.0587	0890.8	088.9	38.78
115.0	001.6315	0244.2	031.7	281.4	000.0578	0893.1	089.2	38.64
116.0	001.6315	0244.5	031.7	281.0	000.0568	0895.4	089.3	38.55
117.0	001.6315	0247.2	031.9	280.6	000.0557	0897.8	089.3	38.49
118.0	001.6315	0251.0	032.1	280.2	000.0546	0900.4	089.3	38.45
119.0	001.6315	0255.0	032.4	279.8	000.0535	0902.8	089.2	38.40
120.0	001.6315	0258.3	032.6	279.5	000.0526	0905.1	089.3	38.35

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Exhibit 18-B

FMCommander Single Allocation Study - 03-20-2015 - NGDC 30 SEC  
KGRI.P's Overlaps (In= 34.99 km, Out= 3.35 km)

KGRI.P CH 201 C3 DA  
Lat= 44 28 59.0, Lng= 122 34 55.0  
0.17 kW 757 M HAAT, 1248 M COR  
Prot.= 60 dBu, Intef.= 40 dBu

KWVA CH 201 A DA BLED20100819ABH  
Lat= 44 04 55.0, Lng= 123 06 34.0  
1.0 kW 54 M HAAT, 232 M COR  
Prot.= 60 dBu, Intef.= 40 dBu



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Exhibit 18-B

Lebanon, OR

## KGRI.P vs. KWVA

03-20-2015      Terrain Data: NGDC 30 SEC      FMOver Analysis

KWVA    BLED20100819ABH

KGRI . P

Channel = 201A  
Max ERP = 1 kW  
RCAMSL = 232 M  
N. Lat. 44 04 55.0  
W. Lng. 123 06 34.0  
Protected  
60 dBu

Channel = 201C3  
Max ERP = 0.17 kW  
RCAMSL = 1248 M  
N. Lat. 44 28 59.0  
W. Lng. 122 34 55.0  
Interfering  
40 dBu

Azi muth (degrees)	ERP (kW)	HAAT (m)	Di st (km)	Azi muth (degrees)	ERP (kW)	HAAT (m)	Di st (km)	Actual (dBu)	I X (km)
343.0	000.1759	0122.9	013.0	235.1	000.0069	0867.5	056.0	39.65	
344.0	000.1683	0123.0	012.9	234.9	000.0068	0868.3	055.8	39.68	
345.0	000.1608	0122.8	012.7	234.7	000.0068	0869.1	055.7	39.69	
346.0	000.1535	0122.5	012.6	234.4	000.0067	0870.0	055.5	39.70	
347.0	000.1464	0122.4	012.4	234.2	000.0066	0870.8	055.4	39.71	
348.0	000.1394	0122.3	012.3	234.0	000.0065	0871.7	055.2	39.72	
349.0	000.1326	0122.1	012.1	233.7	000.0065	0872.6	055.1	39.73	
350.0	000.1260	0121.9	012.0	233.5	000.0064	0873.7	055.0	39.74	
351.0	000.1209	0121.7	011.8	233.3	000.0063	0874.6	054.9	39.76	
352.0	000.1159	0121.4	011.7	233.0	000.0063	0875.6	054.8	39.77	
353.0	000.1110	0121.1	011.6	232.8	000.0062	0876.8	054.6	39.77	
354.0	000.1061	0120.9	011.4	232.6	000.0061	0878.0	054.5	39.77	
355.0	000.1014	0120.8	011.3	232.4	000.0061	0879.3	054.4	39.77	
356.0	000.0968	0120.7	011.2	232.1	000.0060	0880.7	054.3	39.76	
357.0	000.0924	0120.6	011.0	231.9	000.0059	0882.4	054.3	39.76	
358.0	000.0880	0120.3	010.9	231.7	000.0059	0884.1	054.2	39.76	
359.0	000.0837	0119.9	010.8	231.4	000.0058	0886.0	054.1	39.75	
000.0	000.0795	0119.5	010.6	231.2	000.0057	0888.1	054.1	39.75	
001.0	000.0763	0119.2	010.5	231.0	000.0057	0890.1	054.0	39.75	
002.0	000.0731	0119.0	010.4	230.7	000.0056	0892.1	053.9	39.74	
003.0	000.0700	0118.8	010.3	230.5	000.0055	0894.2	053.9	39.72	
004.0	000.0670	0118.5	010.1	230.3	000.0055	0896.3	053.8	39.71	
005.0	000.0640	0118.0	010.0	230.1	000.0054	0898.6	053.8	39.69	
006.0	000.0611	0117.5	009.9	229.8	000.0054	0900.8	053.8	39.70	
007.0	000.0583	0117.2	009.8	229.6	000.0054	0902.9	053.8	39.73	
008.0	000.0555	0117.0	009.6	229.4	000.0054	0905.0	053.7	39.76	
009.0	000.0528	0116.8	009.5	229.2	000.0054	0907.1	053.7	39.78	
010.0	000.0502	0116.3	009.4	228.9	000.0054	0909.0	053.7	39.80	
011.0	000.0481	0115.7	009.3	228.7	000.0054	0910.8	053.7	39.82	
012.0	000.0461	0115.2	009.1	228.5	000.0054	0912.5	053.7	39.84	
013.0	000.0442	0115.0	009.0	228.3	000.0054	0914.0	053.7	39.85	
014.0	000.0423	0114.9	008.9	228.1	000.0054	0915.3	053.7	39.87	
015.0	000.0404	0114.7	008.8	227.9	000.0054	0916.6	053.7	39.88	
016.0	000.0386	0114.3	008.7	227.7	000.0054	0917.8	053.7	39.88	
017.0	000.0368	0113.8	008.6	227.5	000.0054	0918.9	053.7	39.88	
018.0	000.0350	0112.1	008.4	227.3	000.0054	0920.0	053.8	39.87	
019.0	000.0333	0109.6	008.2	227.0	000.0054	0921.0	053.9	39.84	
020.0	000.0317	0107.2	008.0	226.8	000.0054	0921.9	054.0	39.80	
021.0	000.0317	0105.2	007.9	226.6	000.0054	0922.4	054.1	39.80	
022.0	000.0317	0102.0	007.8	226.4	000.0054	0923.0	054.1	39.79	
023.0	000.0317	0097.7	007.6	226.2	000.0054	0923.6	054.2	39.76	
024.0	000.0317	0093.7	007.5	226.0	000.0054	0924.1	054.3	39.72	
025.0	000.0317	0090.4	007.3	225.9	000.0054	0924.5	054.4	39.70	

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026.0	000.0317	0086.6	007.2	225.7	000.0054	0925.0	054.5	39.67
027.0	000.0317	0081.2	006.9	225.5	000.0054	0925.6	054.7	39.61
028.0	000.0317	0074.4	006.6	225.3	000.0054	0926.1	054.9	39.52
029.0	000.0317	0065.8	006.2	225.0	000.0054	0926.8	055.3	39.41
030.0	000.0317	0056.0	005.8	224.8	000.0054	0927.5	055.7	39.27
031.0	000.0317	0044.5	005.2	224.6	000.0054	0928.3	056.3	39.07
032.0	000.0317	0029.9	004.2	224.3	000.0054	0929.5	057.2	38.75
033.0	000.0317	0013.4	004.2	224.2	000.0054	0929.7	057.2	38.76
034.0	000.0317	-0002.9	004.2	224.1	000.0054	0930.0	057.2	38.77
035.0	000.0317	-0019.6	004.2	224.0	000.0054	0930.3	057.2	38.77
036.0	000.0317	-0038.1	004.2	224.0	000.0054	0930.6	057.2	38.78
037.0	000.0317	-0057.6	004.2	223.9	000.0054	0930.9	057.1	38.79
038.0	000.0317	-0073.2	004.2	223.8	000.0054	0931.3	057.1	38.79
039.0	000.0317	-0081.6	004.2	223.8	000.0054	0931.6	057.1	38.80
040.0	000.0317	-0083.7	004.2	223.7	000.0054	0931.9	057.1	38.80
041.0	000.0317	-0081.7	004.2	223.6	000.0054	0932.2	057.1	38.81
042.0	000.0317	-0077.6	004.2	223.5	000.0054	0932.5	057.1	38.81
043.0	000.0317	-0073.0	004.2	223.5	000.0054	0932.9	057.1	38.81
044.0	000.0317	-0068.8	004.2	223.4	000.0054	0933.2	057.1	38.82
045.0	000.0317	-0065.3	004.2	223.3	000.0054	0933.5	057.1	38.82
046.0	000.0317	-0061.3	004.2	223.2	000.0054	0933.8	057.1	38.82
047.0	000.0317	-0057.5	004.2	223.2	000.0054	0934.2	057.1	38.82
048.0	000.0317	-0054.9	004.2	223.1	000.0054	0934.5	057.1	38.82
049.0	000.0317	-0053.5	004.2	223.0	000.0054	0934.8	057.1	38.82
050.0	000.0317	-0053.4	004.2	223.0	000.0054	0935.1	057.2	38.82
051.0	000.0333	-0054.6	004.2	222.9	000.0054	0935.4	057.1	38.84
052.0	000.0350	-0057.5	004.3	222.8	000.0054	0935.7	057.1	38.86
053.0	000.0368	-0062.0	004.3	222.7	000.0054	0936.0	057.0	38.87
054.0	000.0386	-0067.2	004.4	222.6	000.0054	0936.4	057.0	38.89
055.0	000.0404	-0072.9	004.4	222.5	000.0054	0936.7	057.0	38.90
056.0	000.0423	-0078.5	004.5	222.4	000.0054	0937.0	056.9	38.92
057.0	000.0442	-0083.3	004.6	222.4	000.0054	0937.3	056.9	38.93
058.0	000.0461	-0086.4	004.6	222.3	000.0054	0937.5	056.9	38.94
059.0	000.0481	-0088.6	004.7	222.2	000.0054	0937.8	056.8	38.96
060.0	000.0502	-0092.1	004.7	222.1	000.0054	0938.0	056.8	38.97
061.0	000.0528	-0097.1	004.8	222.0	000.0054	0938.2	056.8	38.98
062.0	000.0555	-0102.5	004.8	221.9	000.0054	0938.5	056.7	39.00
063.0	000.0583	-0106.0	004.9	221.8	000.0054	0938.6	056.7	39.01
064.0	000.0611	-0106.5	005.0	221.7	000.0054	0938.8	056.7	39.02
065.0	000.0640	-0104.2	005.0	221.6	000.0054	0938.9	056.7	39.02
066.0	000.0670	-0097.9	005.1	221.5	000.0054	0939.0	056.7	39.03
067.0	000.0700	-0087.3	005.1	221.3	000.0054	0939.1	056.6	39.04
068.0	000.0731	-0073.8	005.2	221.2	000.0054	0939.2	056.6	39.04
069.0	000.0763	-0061.4	005.3	221.1	000.0054	0939.2	056.6	39.05
070.0	000.0795	-0051.7	005.3	221.0	000.0054	0939.2	056.6	39.05
071.0	000.0837	-0043.9	005.4	220.9	000.0054	0939.2	056.6	39.06
072.0	000.0880	-0036.2	005.5	220.8	000.0054	0939.2	056.6	39.06
073.0	000.0924	-0026.3	005.5	220.7	000.0054	0939.2	056.6	39.06
074.0	000.0968	-0015.1	005.6	220.5	000.0054	0939.1	056.6	39.06
075.0	000.1014	-0005.0	005.7	220.4	000.0054	0939.1	056.6	39.06
076.0	000.1061	0002.6	005.7	220.3	000.0054	0939.0	056.6	39.06
077.0	000.1110	0007.6	005.8	220.2	000.0054	0938.9	056.6	39.05
078.0	000.1159	0011.1	005.8	220.1	000.0054	0938.9	056.6	39.05
079.0	000.1209	0014.4	005.9	219.9	000.0054	0938.8	056.6	39.04
080.0	000.1260	0020.6	006.0	219.8	000.0054	0938.7	056.6	39.04
081.0	000.1326	0029.8	006.0	219.7	000.0054	0938.7	056.7	39.03
082.0	000.1394	0038.5	006.9	219.0	000.0054	0938.6	056.1	39.22
083.0	000.1464	0043.3	007.4	218.6	000.0054	0939.0	055.8	39.33
084.0	000.1535	0045.6	007.7	218.3	000.0054	0939.5	055.7	39.37
085.0	000.1608	0044.1	007.7	218.2	000.0054	0939.6	055.8	39.33
086.0	000.1683	0038.7	007.2	218.4	000.0054	0939.2	056.2	39.19
087.0	000.1759	0038.7	007.3	218.3	000.0054	0939.4	056.3	39.18
088.0	000.1837	0039.0	007.4	218.1	000.0054	0939.7	056.3	39.17

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089.0	000.1917	0039.3	007.5	218.0	000.0054	0940.1	056.3	39.16
090.0	000.1998	0045.1	008.2	217.3	000.0054	0941.9	056.0	39.29
091.0	000.2102	0054.1	009.3	216.3	000.0054	0944.9	055.5	39.49
092.0	000.2209	0063.2	010.1	215.5	000.0054	0947.1	055.2	39.63
093.0	000.2318	0071.5	010.8	214.8	000.0054	0948.4	054.9	39.72
094.0	000.2430	0074.0	011.1	214.4	000.0054	0948.8	055.0	39.72
095.0	000.2545	0076.7	011.4	214.1	000.0054	0949.0	055.0	39.71
096.0	000.2663	0079.4	011.7	213.7	000.0054	0949.0	055.0	39.70
097.0	000.2783	0081.6	012.0	213.3	000.0054	0948.7	055.1	39.68
098.0	000.2905	0082.8	012.2	213.0	000.0054	0948.3	055.2	39.64
099.0	000.3031	0083.7	012.4	212.8	000.0054	0947.8	055.3	39.59
100.0	000.3158	0084.2	012.5	212.5	000.0054	0947.3	055.4	39.54
101.0	000.3325	0084.2	012.7	212.3	000.0054	0946.7	055.6	39.48
102.0	000.3495	0084.1	012.8	212.1	000.0054	0946.1	055.7	39.42

Exhibit 18-C

FMCommander Single Allocation Study - 03-20-2015 - NGDC 30 SEC  
KGRI.P's Overlaps (In= 44.66 km, Out= 12.73 km)

KGRI.P CH 201 C3 DA  
Lat= 44 28 59.0, Lng= 122 34 55.0  
0.17 kW 757 M HAAT, 1248 M COR  
Prot.= 60 dBu, Intef.= 40 dBu

KLBR CH 201 C2 DA BLED20051012ADB  
Lat= 44 02 49.0, Lng= 121 31 50.0  
5.0 kW 259 M HAAT, 1827 M COR  
Prot.= 60 dBu, Intef.= 40 dBu

